Background: Beginning with crops harvested in 2009, farmers can choose between:
1. The Traditional Farm Program Suite, consisting of price counter-cyclical, direct income, and marketing loan programs, or
2. An ACRE Farm Program Suite, consisting of a state revenue program, 80% of direct income payments, and marketing loan payments at 70% of the loan rate
   ▲ See the appendix (page 4) for a thumbnail sketch of ACRE provisions in the 2008 Farm Bill.

Comparing program suites leads to this Decision Question: “Does ACRE’s state revenue program improve management of revenue risk enough, compared to the price counter-cyclical program, to compensate for the 20% reduction in direct payments and 30% reduction in marketing loan rates?”

▲ The reason for focusing on revenue risk management is that both ACRE’s state revenue program and the price counter-cyclical program address a systemic risk related to revenue. A systemic risk is a risk beyond the control of an individual farmer. ACRE addresses the systemic risk of a decline in state revenue, defined as a state’s yield times U.S. cash price. The counter-cyclical program addresses the systemic risk of a decline in U.S. cash price.

Risk Management Benefits of ACRE’s Revenue Program vs. Counter-Cyclical Program
▲ Revenue coverage per acre, adjusted for the program’s payment rate, is higher for ACRE. For 2009 harvested Ohio corn, soybeans, and wheat; revenue coverage under ACRE is estimated to be at least 80% higher than under the counter-cyclical program (Figure 1, page 2).
   ▲ ACRE updates yield annually as a 5-year Olympic moving average. This yield for 2009 markedly exceeds the historical counter-cyclical yield (Table 1, page 2).
   ▲ ACRE updates price annually as a 2-year moving average. This price for 2009 markedly exceeds the fixed counter-cyclical price (Table 1, page 2).
   ▲ ACRE’s annual update of its revenue coverage is especially important when costs are increasing faster than productivity, as has happened since 2005. For Ohio for 2009, revenue coverage under ACRE is estimated to exceed variable production costs while variable costs exceed revenue coverage under the counter-cyclical program (Figure 1, page 2).
   ▲ Because ACRE’s revenue guarantee cannot decline by more than 10% per year, revenue coverage under ACRE will be higher than under the counter-cyclical program through the 2012 crop no matter what happens to price and yield over the next few years (Figure 2, page 3).

▲ ACRE payments are tied to planted acres, not base acres. Planted acres are a farm’s current production risk. They can differ markedly from the historical base acres used to calculate payments from the counter-cyclical program (Table 1, page 2).
   ▲ Note, planted acres that receive an ACRE payment cannot exceed a farm’s total base acres.

Risk Management Costs of ACRE’s Revenue Program vs. Counter-Cyclical Program
▲ Direct income payments are reduced by 20%. Ohio farmers received direct payments of $165 million in 2007 and averaged 8.9 million acres planted per year to ACRE crops in 2006-08. A 20% reduction in direct payments equals $3.71/planted acre [(20% of $165 million) / 8.9 million].

▲ Under current costs, ACRE’s 30% lower loan rate has limited importance. Variable production costs exceed or approximate the Ohio loan rates for corn ($2.91 vs. $2.00); soybeans ($5.08 vs. $5.12); and wheat ($4.01 vs. $2.34). If price declines below variable costs, acres planted to the crop should decline, causing price to increase.

▲ However, ACRE’s revenue guarantee is not fixed. ACRE’s revenue coverage can change each year. In particular, it will decline if market revenue declines. Thus, a decision-maker must
ask, “What is the possibility variable costs will be below the loan rate and target price by 2012?” The greater is this possibility, the more likely are marketing loan and counter-cyclical payments.

**Summary:** For average Ohio row crop land, the ACRE decision question can be rephrased as: “Is the higher per acre revenue coverage of ACRE’s state revenue program plus ACRE’s better match with planted acres worth an annual risk management fee of $3.71 per planted acre plus any estimated potential marketing loan and countercyclical payments (these payments depend on variable cost of production being below the target price/loan rate)?” Each person facing a decision on ACRE should customize this question to match their individual farm’s situation.

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<tbody>
<tr>
<td>Corn</td>
<td>144.0/acre</td>
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<tr>
<td>Beans</td>
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<td>36.8/acre</td>
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<td>4.5 million</td>
<td>3.5 million</td>
</tr>
<tr>
<td>Wheat</td>
<td>64.0/acre</td>
<td>53.2/acre</td>
<td>$6.59/bushel</td>
<td>$3.40/bushel</td>
<td>1.0 million</td>
<td>1.1 million</td>
</tr>
</tbody>
</table>

NOTES: An Olympic average excludes the highest and lowest values. Effective target price equals (target price minus direct payment rate per bushel). SOURCE: U.S. Department of Agriculture.
Figure 2. Estimated Minimum Per Planted Acre Revenue Coverage, Adjusted for the Program's Payment Rate, ACRE vs. Counter-Cyclical Farm Programs by Crop Year, Corn, Soybeans, and Wheat, Ohio, 2009-2012

Panel A: Corn

Panel B: Soybean

Panel C: Wheat

The 10% limit on decline in ACRE’s revenue guarantee per crop year allows its minimum guarantee (and thus minimum coverage level) to be estimated for future years. To illustrate for wheat, minimum coverage level for the 2010 crop year is 90% of $316/acre or $285/acre (decline of 10%). Some change in program parameters occur. The ACRE revenue program payment rate is 85%, not 83.3% in 2012. Counter-cyclical effective target price for soybeans is $5.36 for 2009 and $3.56 for 2009-2012. Effective target price for wheat is $3.40 for 2009 and $3.65 for 2009-2012.

ACRE Decision:
(1) The decision to elect ACRE begins with covered commodities and peanuts harvested in 2009.
(2) ACRE must be elected -- if no choice is made, a farmer remains in the traditional farm programs.
(3) As long as a farmer is not in ACRE, the election of ACRE is an annual decision. However, once ACRE is elected, a FSA farm is in ACRE through the 2012 crop. Thus, a farmer can elect to participate in ACRE for the 2009-12 crops, 2010-12 crops, 2011-12 crops, or 2012 crop.
(4) ACRE must be elected for all covered program crops and peanuts grown on a farm (for example, if corn, soybeans, and wheat are grown on a FSA farm, ACRE must be elected for all 3 crops). However, ACRE payments are crop specific (corn but not wheat can receive a payment).

ACRE Suite of Farm Programs:
► Direct payments equal to 80% of traditional direct payments established in the 2008 Farm Bill
► Marketing loan payments at 70% of the marketing loan rates established in the 2008 Farm Bill
► ACRE state revenue payments

ACRE Revenue Payment to a Farm for a Crop:
a. \([83.3\% \text{ of the farm’s} \times \text{planted\ acres\ planted\ to\ the\ crop}] \times (83.3\% \text{ becomes} 85\% \text{ for the 2012 crop})\)
b. \(\times \text{ lesser of} \ [\text{ACRE state revenue guarantee per acre minus state actual revenue per acre}]\)
   or \(\times \text{ 25\% of ACRE state revenue guarantee}\)
   \(\text{ACRE state payment per acre capped at} 25\% \text{ of the state revenue guarantee}\)
c. \(\times \text{ \{farm's Olympic average yield (removes high and low yield) for} 5 \text{ most recent crop years}\} \times 83.3\% \text{ price for} \)
   \(\text{divided by} \ [\text{state’s Olympic average yield for} 5 \text{ most recent crop years}]\)

**ACRE state revenue guarantee per acre for a crop for a year is:**
► \([90\% \times (\text{ACRE state yield per planted acre} \times \text{ACRE price})]\)
   - ACRE state yield is an Olympic average of a state’s yield for the 5 most recent crop years
   - ACRE price is an average of U.S. market year cash price for the 2 most recent crop years
   - For 2010-12, revenue guarantee cannot change more than 10% from prior year’s guarantee
   - Separate state revenue guarantees are created for irrigated and non-irrigated land if a state’s planted acres are at least 25% irrigated and at least 25% non-irrigated.

**ACRE actual state revenue per acre for a crop for a year is:**
► \([\text{state yield per planted acre for crop year} \times \text{higher of} \ [\text{U.S. average price for the crop year or 70\% of crop’s marketing loan rate}]\]

**ACRE Planted Acre Limit:** Payments cannot be received on more than a farm’s total base acres.
► If total acres planted to crops eligible for ACRE exceed a farm’s total base acres, the farmer and landlord choose which planted acres to enroll in ACRE.

**ACRE Farm Eligibility Condition:**
To receive an ACRE payment, a farm’s actual revenue for the crop must be less than the farm’s ACRE benchmark revenue for that crop year.
► Farm’s actual revenue is: \([\text{farm’s actual yield per planted acre} \times \text{U.S. average price for crop year}]\)
► Farm’s ACRE benchmark revenue is:
   \([\text{Olympic average of farm’s yield for} 5 \text{ most recent years} \times \text{average U.S. price for the} 2 \text{ most recent years} \times \text{average U.S. price for the crop}]\)

**ACRE Payment Limits for a Person or Legal Entity:**
► Direct Payments: \$40,000 minus amount equal to 20% reduction in direct payments
► ACRE revenue payments: \$65,000 plus amount equal to 20% reduction in direct payments